

IN THE CLAIMS:

Applicant has requested amendment to claims 15, 19, 23, 27, 30, 33 and 36, a copy of each of these claims being presented herein. A marked-up version of these claims entitled "Version With Markings Showing Changes Made" indicating insertions and deletions is included as an attachment to this amendment.

IN THE CLAIMS:

Please amend claims 15, 19, 23, 27, 30, 33 and 36 as follows:

530 7 15. (Three Times Amended) Digital signal conversion apparatus for converting a first digital image signal to a second digital image signal having a high resolution component, comprising:  
a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained by learning with at least a training digital image signal having said high resolution component;  
means for receiving said first digital image signal including pixel data representing pixel values;  
means for clustering a plurality of pixel data of said first digital image signal adjacent to a pixel data of said second digital image signal to produce a class;  
means for retrieving said class data from one of said addresses of said memory corresponding to said class of said first digital image signal; and

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means for generating all of pixel data, representing pixel values  
of said second digital image signal, in the same manner in  
accordance with a common algorithm based upon at least said  
retrieved class data.

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19. (Three Times Amended) A digital signal data conversion  
method for converting a first digital image signal to a second  
digital image signal having a high resolution component,  
comprising the steps of:  
storing class data for respective classes at addresses in a  
memory corresponding to said respective classes, said class  
data obtained by learning with at least a training digital  
image signal having said high resolution component;  
receiving said first digital image signal including pixel data  
representing pixel values;  
clustering a plurality of pixel data of said first digital image  
signal adjacent to a pixel data of said second digital image  
signal to produce a class;  
retrieving said class data from one of said addresses of said  
memory corresponding to said class of said first digital  
video signal; and  
generating all of pixel data, representing pixel values of said  
second digital image signal, in the same manner in  
accordance with a common algorithm based upon at least said  
retrieved class data.

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23. (Three Times Amended) Digital signal conversion apparatus  
for converting a digital video signal admitting of a first  
standard into a digital video signal admitting of a second  
standard, a first resolution of said digital video signal  
admitting of said first standard being lower than a second  
resolution of said digital video signal admitting of said second  
standard, comprising:  
a memory for storing class data for respective classes at  
addresses corresponding to said respective classes, said  
class data obtained by learning with at least a training  
digital video signal admitting of said second standard  
having said second resolution;  
means for receiving an input digital video signal including pixel  
data and admitting of said first standard;  
means for clustering a plurality of pixel data of said input  
digital video signal adjacent to a pixel data of a second  
digital video signal to produce a class;  
means for retrieving said class data from one of said addresses  
of said memory corresponding to said class of said input  
digital video signal admitting of said first standard; and  
means for generating all of pixel data, representing pixel values  
of said digital video signal admitting of said second  
standard, in the same manner in accordance with a common  
algorithm based upon at least said class data which has been  
retrieved.

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27. (Three Times Amended) Digital signal conversion apparatus  
for converting a standard definition digital video signal to a  
high definition digital video signal, comprising:  
a memory for storing class data for respective classes at  
addresses corresponding to said respective classes, said  
class data obtained by learning with at least a training  
high definition video signal;  
means for receiving a standard definition digital video signal  
having pixel data representing pixel values;  
means for clustering a plurality of pixel data of said standard  
definition digital video signal adjacent to a pixel data of  
a second digital video signal to produce a class;  
means for retrieving said class data from one of said addresses  
of said memory corresponding to said class of said standard  
definition digital video signal; and  
means for generating all of pixel data, representing pixel values  
of a high definition digital video signal, in the same  
manner in accordance with a common algorithm based upon at  
least said retrieved class data.

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30. (Three Times Amended) A digital signal conversion method,  
comprising the steps of:  
storing class data for respective classes at addresses in a  
memory corresponding to said respective classes, said class  
data obtained by learning with at least a training high  
definition digital video signal;

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D5  
receiving a standard definition digital video signal having pixel data representing pixel values;  
clustering a plurality of pixel data of said standard definition digital video signal adjacent to a pixel data of a second digital video signal to produce a class;  
retrieving said stored class data from one of said addresses corresponding to said class of said standard definition digital video signal; and  
generating all of pixel data, representing pixel values of a second output digital video signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data.

33. (Three Times Amended) Digital data conversion apparatus for converting a first digital image signal to a second digital image signal having a high resolution component, comprising:

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a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained by learning with at least a training digital image data having said high resolution component;

means for receiving said first digital image signal including pixel data representing pixel values;

means for clustering a plurality of pixel data of said first digital image signal adjacent to a plurality of pixel data of said second digital image signal to produce a class, said class being used to retrieve a class data to generate a plurality of

pixel data representing pixel values of a second digital image signal;

means for retrieving said class data from addresses of said memory corresponding to said class of said first digital image signal; and

means for generating all of said pixel data, representing pixel values of said second digital image signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data.

36. (Three Times Amended) Digital data conversion method for converting a first digital image signal to a second digital image signal having a high resolution component, comprising the steps of:

storing class data for respective classes at addresses in a memory corresponding to said respective classes, said class data obtained by learning with at least a training digital image data having said high resolution component;

receiving said first digital image signal including pixel data representing pixel values;

clustering a plurality of pixel data of said first digital image signal adjacent to a plurality of pixel data of said second digital image signal to produce a class, said class being used to retrieve a class data to generate a plurality of pixel data representing pixel values of a second digital image signal;